

**ABSTRACT****Multiple-User CDMA Wireless Communication System**

A receiver for CDMA signals, in which data intended for transmission to  
5 multiple intended receivers is spread by respective orthogonal spreading  
codes and scrambled by an aperiodic random scrambling code, includes a  
processing branch for each of a number of base stations from which the  
receiver may pick up CDMA signals. Each processing branch performs both  
channel equalisation based on a set of weights for that branch, and a  
10 decoding operation. The outputs of the branches are combined to produce a  
combined signal which is used both for determining the data intended for the  
receiver, and in a feedback loop to improve the sets of weights. The receiver  
is reliable even in the presence of multipath fading and during soft handover.

15 **Fig. 3(a)**